ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP COMMITTEE
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL

Game Branch / HPC Project Number:	13-406

PROJECT INFORMATION

Project Title: Game Management Unit 42 Trail Cameras

Region and Game Management Unit: Region 4 / GMU 42

Local Habitat Partnership Committee (LHPC): • Southwest	**Was the project presented to the LHPC?** YES[] NO[x]

Has this project been submitted in previous years? YES[]   NO[x]
If Yes, was it funded? YES[]   NO[] → **Funded HPC Project #(s)**:

Project Type: Equipment Purchase (Trail Cameras)

Brief Project Summary:
Purchase 16 (Infrared ready) digital trail cameras (Covert MP6 or similar) to be placed at wildlife waters during critical summer months to document wildlife use and collect data on the bighorn sheep population. Infrared technology is recommended to avoid stressing wildlife at night and avoid attracting unwanted attention to the cameras. Cameras will be utilized for other Game and Fish projects when not deployed for water monitoring (i.e. deer water monitoring, law enforcement investigations, habitat monitoring).

Big Game Wildlife Species to Benefit: Primary is Bighorn Sheep (60%) other species including Mule Deer (20%), Mountain Lion (10%), and Javelina (10%). Species will benefit by increased knowledge of wildlife distribution and health which will be incorporated into hunt recommendations and management actions.

Implementation Schedule (Month/Day/Year): Project Start Date: May 2014 Project End Date: September 2016	**Environmental Compliance**: NEPA Completed: Yes[] No[] N/A[x] Projected Completion Date: _____ State Historic Preservation Office - Archaeological Clearance: Yes[] No[] N/A[x] Projected Completion Date: _____ Arizona Game and Fish Department EA Checklist: N/A[] To be Completed by: Craig Heath_____ Projected Completion Date: April 2014

PROJECT FUNDING

Special Big Game License Tag Funds Requested:	$ 3,415
Cost Share or Matching Funds:	$ 0
Total Project Costs:	**$ 3,415**

PARTICIPANT INFORMATION

Applicant (please print): Craig Heath	**Address**: 9140 E. 28th Street Yuma, AZ 85365	**E-mail**: cheath@azgfd.gov
Telephone: 928-856-0764		**Date**: 8/28/2013

AGFD Contact and Phone No. (If applicant is not AGFD personnel):

Project has been coordinated with:
Cody Carter AZ BLM – No NEPA paperwork required for cameras (e-mail correspondence 8/22/13)

NEED STATEMENT – PROBLEM ANALYSIS:
Game Management Unit 42 has had significant bighorn sheep management efforts over the past eight years. These efforts include bighorn sheep transplants (2005, 2007, and 2010) as well as water improvements (Burnt Mountain and Arch pothole). The ongoing bighorn sheep management efforts have also incorporated an active mountain lion management protocol in Region IV. This effort included capture and collaring of mountain lions in GMU 42 and monitoring lion predation on the local bighorn sheep herds.

In 2013 the bighorn sheep population in GMU 42 was healthy enough to support the first bighorn sheep hunt in decades (1 tag). This hunt is the result of the successful efforts of the Department and the volunteers who have assisted with these projects over the years (ADBSS).

Currently the bighorn sheep surveys for GMU 42 cover the main block of the Big Horn Mountains only. Based on collared bighorn sheep, we know that the sheep travel as far away as the Harquahala Mountains (GMU 44A). We suspect that bighorn sheep also travel to Sugarloaf Mountain and possibly into the Belmont Mountains (northeast).

Placing trail cameras at water sources throughout the range during the critical summer months would provide valuable data on the male component of the bighorn sheep population. Since mature rams are a critical component of the population as well as the hunt recommendation it is important to gather as much data on that segment of the herd as possible. Rams are also more easily identified by unique horn markings whereas ewes are not. Placing cameras outside the bighorn sheep survey blocks will also provide valuable data on bighorn sheep movements and occupied range. It may also be possible to gather other incidental data on the bighorn sheep population (disease, reproduction, predators) thru the use of cameras. All incidental data recorded by the use of the cameras will be incorporated into the GMU 42 hunt recommendations and management actions.

PROJECT OBJECTIVES:
1. Collect photographic data on the bighorn sheep rams in GMU 42 (class I-IV).
2. Document sheep use of the designed sheep waters in the unit (811, Burnt Mountain, Arch Pothole).
3. Document whether sheep are using the low elevation waters in the unit and on the periphery of the known sheep areas (AZGFD catchments 598, 660, 661, 946, 947, 948, 603 and 604).
4. Document whether sheep are using other available water sources in the range (livestock drinkers/tanks).
5. Document the frequency of lion use at waters and utilize the data to assist with the Region IV Adaptive Lion Management Plan.
6. Monitor the general appearance of ungulates using the waters potentially as an early detection of poor health or disease.

PROJECT DESCRIPTION AND STRATEGIES:
Place trail cameras at wildlife waters throughout GMU 42 bighorn sheep habitat starting late May and remove cameras about mid-September. GMU 42 has 16 targeted waters that need to be monitored during this period. The district Wildlife Manager will monitor the cameras and exchange memory cards during water checks in the summer months. The district Wildlife Manager and Regional Wildlife Specialist would examine the resulting photos to determine the ram component of the herd as well as any incidental data (dispersion/disease/reproduction/predators). Also, when lions are documented at waters they may be captured as part of the Region IV Adaptive Lion Management Protocol.

PROJECT LOCATION:
The 16 waters to be monitored are all located within the boundaries of GMU 42 (see attached map) and include:
1) AZGFD Catchments; 603, 604, 658, 660, 661, 811, 946, 947, 948, Arch pothole and Burnt Mountain tanks.
2) Livestock waters; Little Horn Well, Pegrin Well, Purple Pansy mine, 2 wells on the west boundary road of the Big Horn Wilderness.

LAND OWNERSHIP AT THE PROJECT SITE(S):
(if the project area is private property, please state specifically and provide the landowner's name)
*   All waters are located on public lands managed by the Hassayampa Field Office of the U.S. Bureau of Land Management.

    IF PRIVATE PROPERTY, IS THERE A COOPERATIVE BIG GAME STEWARDSHIP or LANDOWNER AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?
    YES[]   NO[]   N/A[x]

HABITAT DESCRIPTION:
The Big Horn Mountains, Sugarloaf Mountain and Belmont Mountains range in elevation from 1300' at their base to 3480' at Big Horn Peak. The topography is mostly gently rolling hills with some rugged cliffs. The Sonoran desert scrub vegetative community encompasses the mountain ranges with two sub-divisions evident: the Upper Sonoran desert scrub community and the Lower Sonoran desert scrub community as described by Brown and Lowe (1980).

ITEMIZED USE OF FUNDS:

Special Big Game License Tag Funds
        Equipment:
                Covert MP6 Trail Camera (or similar models) - 16 @ $200 = $ 3,200

8GB SanDisk SD Card x 15 @ $12	= $ 180
AA batteries box of 24 x 6 @ $5.83	= $ 35
Total	= $ 3,415

Cost Share or Matching Funds (*for volunteer labor rates please refer to the worksheet below*)
N/A

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:
Arizona Desert Sheep Society – members have assisted with the lion capture and water developments in GMU 42 in the last year and could potentially assist with camera placement/removal and monitoring.

Mule Deer Foundation and Arizona Deer Association – members have assisted with the lion captures and water developments in GMU 42 in the last year and could potentially assist with camera placement/removal and monitoring.

Southwest Hunting Adventures – Currently this guiding service is monitoring several of the bighorn sheep waters in GMU 42 and providing pictures and important data to the Wildlife Manager. These individuals could assist with monitoring and security of the cameras at these remote waters.

WOULD IMPLEMENTATION OF THIS PROJECT ASSIST IN PROVIDING, MAINTAINING, OR FACILITATING RECREATIONAL ACCESS?
YES[]   NO[]   N/A[x]

PROJECT MONITORING PLAN:
WM will compile all photographic results and log them into the Region IV database. All relevant bighorn sheep data will be incorporated into the GMU 42 hunt recommendation in order to supplement the standard aerial surveys and other incidental data.

PROJECT MAINTENANCE:
The district Wildlife Manager would be responsible for all standard maintenance.

PROJECT COMPLETION REPORT TO BE FILED BY:
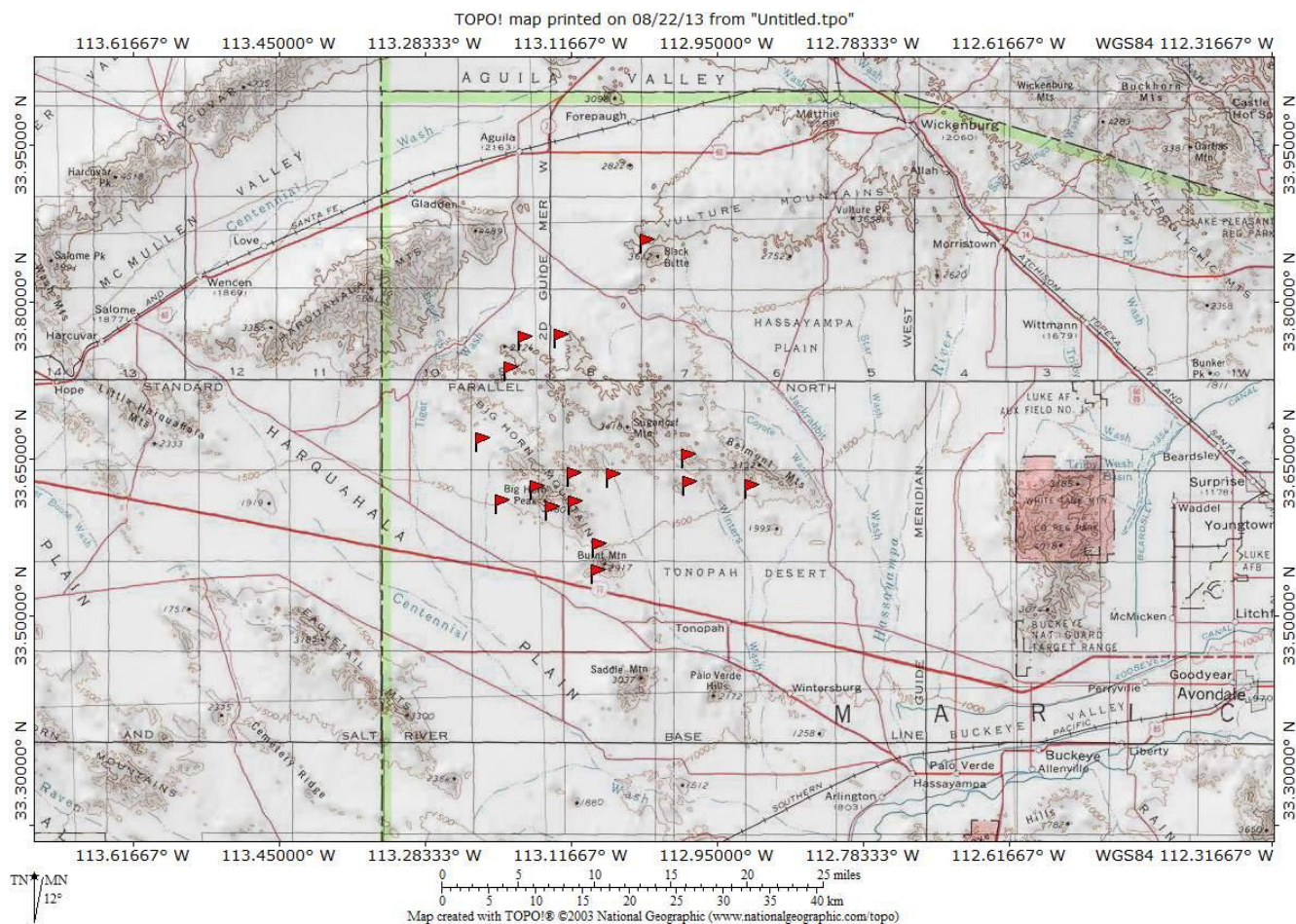Craig Heath

WATER DEVELOPMENT PROJECTS (*please use the worksheet below***):**
N/A

TREE CLEARING/REMOVAL PROJECTS (*please use the worksheet below***):**
N/A

Map of GMU 42 Targeted Waters for Cameras